

BODY BUILDER INSTRUCTIONS

Mack Trucks



Oil and Filters
MD
Section 1

Oils and Filters

This information provides specifications for Oil and Filters applications in MACK vehicles.

Note: We have attempted to cover as much information as possible. However, this information does not cover all the unique variations that a vehicle chassis may present. Note that illustrations are typical but may not reflect all the variations of assembly. All data provided is based on information that was current at time of release. However, **this information is subject to change without notice.**

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Oil and Filters

Approved Oils

For a complete list of Approved Oils used in Mack vehicles (Engines, transmissions, and other components), refer to **Approved Oils, Mack Components**.

Cummins Engine

Oil Capacity

Engine	Oil Pan Type	Oil Capacity
B6.7	Standard Oil Pan	15.6 liters (16 quarts)

Oil and Filter Maintenance Intervals

		Severe Duty (<6 mpg or 40% idle)	Normal Duty (6 - 10 mpg)	Light Duty (>10 mpg)
		Miles / Hours / Months	Miles / Hours / Months	Miles / Hours / Months
Oil Drain and Oil Filter Change Interval	Standard Oil Pan	12,,000 / 900 / 12	25,000 / 1000 / 12	30,000 / 1000 / 12

Engine Oil Type / Quality

Engines designed with exhaust aftertreatment systems requiring an oil that meets MACK EO-N quality standards. The MACK EO-N oil quality standard is essential to adequately protect the engines at the drain intervals specified.

Recommended SAE Grades For Engines
MACK Bulldog EO-N
Pre-2021 engine model year: 15W-40 From 2021 engine model year: 10W-30

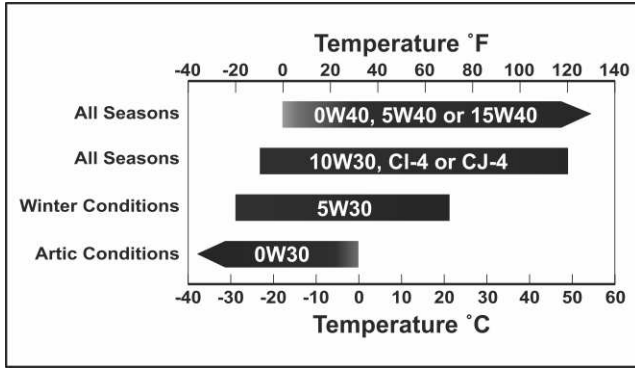


CAUTION

Extra oil additives must never be added to any engine oil used.

Note: For complete maintenance recommendations and guidelines, refer to EPA 2021 B6.7 CM2350 Owner's Manual and EPA 2017 B6.7 CM2350 Operation and Maintenance Manual. Contact 1-800-CUMMINS™ (1-800-286-6467) or visit www.cummins.com for any support.

Viscosity diagram



T2182561

Meritor Axle

Oil Viscosity

Recommended SAE Oil quality for Rear Axles	SAE 75W-90
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Oil Capacity

Front axle (Hub only)	0.35 to 0.415 liters (0.75 to 0.875 US pints)
Rear axle (Hub and axle housing)	13X axle: 12.80 liters (27.05 US pints) 14X axle: 15.76 liters (33.31 US pints)

Allison Transmission, Lubrication

Check Transmission Oil Level

Check the transmission oil level at each service interval. To do so, park the vehicle on a level surface and check the transmission oil level. Add approved transmission oil as needed.

Prognostics is turned off for Mack Medium Duty trucks. Recommended oil quality and change interval would change if prognostics is turned on.

Oil Quality	Duty Cycle	Oil Change Interval	Spin-On Control Main Filter Change Interval	Internal Filter Change Interval
TES 295	Normal Duty ¹	Whichever comes first of the following: <ul style="list-style-type: none"> • 240,000 km (150,000 miles) • 4000 hours of operation • 48 calendar months 	Whichever comes first of the following: <ul style="list-style-type: none"> • 80,000 km (50,000 miles) • 2000 hours of operation • 24 calendar months 	Every transmission overhaul
	Severe Duty ²	Whichever comes first of the following: <ul style="list-style-type: none"> • 120,000 km (75,000 miles) • 3000 hours of operation • 36 calendar months 	Whichever comes first of the following: <ul style="list-style-type: none"> • 80,000 km (50,000 miles) • 2000 hours of operation • 24 calendar months 	Every transmission overhaul

¹ General Vocation: All vocations are not classified as severe

² Severe Vocation: On/Off Highway, Refuse, City Transit, Shuttle Transit

Transmission Oil Capacity

Transmission		1000/2000 Product Family Allison Transmission	3000 Product Family Allison Transmission
Oil Capacity, Standard Sump	Initial Refill ¹	14 liters (14.8 quarts)	27(29 quarts)
	Refill ¹	10 liters (10.6 quarts)	18(19 quarts)

¹ Approximate quantities, do not include external lines, cooler, and hose.

Note: Approximate fluid loss for main filter (Spin- On) = 0.47 liters (one pint).

Coolant Requirements

Note: DO NOT mix different coolant products, such as regular antifreeze and extended life antifreeze, etc.

Note: Refer to the decal on the coolant expansion tank for the factory fill coolant type.

This coolant must meet or exceed ASTM D6210 or TMC RP329.

Effective August 24th, 2023, Mack Trucks has changed from Genuine Extended Life NF Premixed 50/50 Coolant to Genuine VCS2 Coolant. The Genuine VCS2 Coolant offers improved coolant system performance and a lower environmental impact.

Coolant

Product details:

- Color: Orange
- Advanced Phosphate Organic Acid Technology (POAT)
- 2EHA & Nitrite Free Formula
- Cooling System Protection: 1.5 million mile/10 Years/36,000 hours
- Eliminates the need for Extenders and Supplemental Coolant Additives (SCAs)
- Superior Water Pump Protection: Perfect 10 water pump test rating
- Outstanding protection against corrosion, cavitation, scale, and deposits.

Coolant Change Interval Refer Driver's Manual

Coolant Filter Change Interval Refer Driver's Manual

Coolant Testing The slow depleting additive chemistry does not require regular testing, but the coolant can be tested with a FleetFix Maintenance Test Strip and the FleetFix Dilution Test Kit. The FleetFix Maintenance Test Strip (a measure for nitrite and carboxylate levels, while the FleetFix Dilution Test Kit can determine contamination of the coolant and continued protection levels. The freeze protection level should be checked at least twice per year with a standard refractometer. -35°F (-2°C) is the freeze point of approximately 50/50 ELC coolant.

Cooling System Capacities Approximately 22.7 liters (24 US quarts)

Coolant capacity

Coolant capacity (quantity shown is only engine)	11.5 liters (3.0 gal)
Coolant capacity (quantity shown for complete system)	22.7 liters (5.0 gal)

Recommendations for coolant change

The systems in contact with VCS must be drained/purged and then completely rinsed or flushed with demineralized/deionized water before changing from VCS to VCS-2 coolant.

The coolant must be visually checked before using for the first time. The coolant color must be orange at the outlets.

Water Specifications

Water Specifications	Parts per million (ppm)	Grains per Gallon	pH	µS/cm	mg/KmnO4/l
Chlorides, maximum	< 40	< 2.34			
Sulfates, maximum	< 100	< 5.8			
Total dissolved solids, maximum	< 340	< 20			
Total hardness	< 170	< 10			
pH			5.5 – 9		
Silica	< 20	< 1.17			
Iron	< 0.10	< 0.0058			
Manganese	< 0.05	< 0.0029			
Conductivity				< 500	
CODMn					< 15

Notes
